REMARKS

The Applicants request reconsideration of the rejection.

Claims 1-21 are now pending.

Claims 1 and 9 were rejected under 35 U.S.C. 102(b) as being anticipated by JP 10-222312 (JP). The Applicants traverse as follows.

As amended, Claim 1 is directed to a storage device comprising first, second, and third storage volumes for storing data, a virtual storage volume, and a control unit. The control unit includes a memory control unit that manages or controls a correspondence between the first, second, and third storage volumes and the virtual storage volume, and includes information concerning to which one of the first, second, and third storage volumes an access is to be made in response to a data I/O request from an information processing unit by reference to the correspondence.

JP is seen to be directed to a storage system that has and first second memory controllers, the first memory controller processing write or read instructions from a higher order apparatus such as a host computer, and the second memory controller controlling several recording media. Data acquired by the first memory controller are

stored as backup data in a first memory medium controlled by the first memory controller. When an update demand is received from the host computer, the data stored in the first memory medium are updated by the first memory controller and recorded in a second memory medium, under control of the second memory controller. The first memory controller starts backup of the copy of the updated data to a third memory medium when the amount of updated data exceeds a constant rate.

Thus, JP neither discloses nor suggests the combination of the three storage volumes and a virtual storage volume, together with a control unit having the claimed memory control unit which manages or controls a correspondence between the three storage volumes and the virtual storage volumes. Moreover, JP neither discloses nor suggests the numerous details of dependent Claims 2-8 and 17-21.

Independent Claim 9 is a method claim of controlling a storage device provided with first, second, and third storage volumes for storing data, including the steps of managing or controlling a correspondence between the first, second, and third storage volumes and a virtual storage volume which is virtually possessed by the storage device, and controlling to which one of the first, second, and

third storage volumes an accessed to be made in response to

a data I/O request from the information processing unit by

reference to the correspondence. Accordingly, JP does not

anticipate method Claim 9, or its dependent Claims 10-16.

Claims 2-8 and 10-16 were rejected under 35 U.S.C.

103(a) as being unpatentable over JP in view of Yuasa et

al., U.S. 6,636,953 (Yuasa). JP has been distinguished

above. Yuasa is distinguishable as failing to disclose the

limitations missing from JP as advanced above, and

therefore the combination of JP and Yuasa does not render

obvious Claims 2-8 and 10-16.

In addition, while the Applicants note broad teachings

in Yuasa of judging whether a storage medium has sufficient

free space to store the contents of data being transferred

from one storage device to another, the passages noted by

the Examiner (Column 2, lines 43-62 and Column 29, line 39

through Column 31, line 53) are substantially directed to

teachings regarding the display of plural storage units

which can be selected by a user as targets for storing data

in priority order, wherein a higher-priority, but full,

storage unit is replaced with the next-highest priority

storage unit having sufficient capacity for receiving the

data. None of the limitations concerning means or steps

for managing or controlling a correspondence between first,

second and third storage volumes and a virtual storage volume, or controlling access to the first, second, and third storage volumes based on the correspondence, is disclosed or suggested by Yuasa whether taken individually or in combination with JP. Further, the numerous patentable limitations of Claims 2-8 and 10-16 are not shown by Yuasa.

Therefore, in view of the foregoing amendments and remarks, the Applicants respectfully request reconsideration of the rejection and allowance of the claims.

Respectfully submitted,

Daniel J. Stanger
Registration No. 32,846

MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.
1800 Diagonal Rd., Suite 370
Alexandria, Virginia 22313-1450
(703) 684-1120
Date: December 22, 2005